

**VOLUME 10 SAFETY ASSURANCE SYSTEM POLICY AND PROCEDURES****CHAPTER 6 ANALYSIS, ASSESSMENT, AND ACTION****Section 1 Safety Assurance System: Module 5 Analysis and Assessment**

**10-6-1-1 GENERAL.** This chapter includes information about the Analysis, Assessment, and Action (AAA) process for Performance Assessments (PA) and Design Assessments (DA). PAs determine if the certificate holder's or applicant's system performs as intended by regulations in such a way that a safety risk is being managed to an acceptable level. DAs determine if the certificate holder's or applicant's system design meets the standards for acceptance or approval. This process uses data collected by aviation safety inspectors (ASI). The principal inspector (PI) or certification project manager (CPM) may use data from other sources to help make the assessment. The action process requires the PI/CPM to determine and document the appropriate course of action based on the result of the analysis and assessment.

NOTE: The AAA process described in this chapter aligns with the Compliance Action requirements of Volume 14, Chapter 1, Sections 1 and 2. The action choices listed in Volume 10, Chapter 6, Section 2 are all acceptable methods of addressing noncompliance at its source. Volume 10 and Volume 14 guidance must be followed to document Compliance Actions in the Safety Assurance System (SAS).

NOTE: Security is an important feature of the SAS automation. If you, as a SAS user, detect a security breach or there is an indication of a security risk, you should immediately notify the office SAS Security Auditor or SAS Administrator. See Volume 10, Chapter 1, Section 1, Subparagraph 10-1-1-5J, Security Risks, for more information.

**A. Purpose.** The PI/CPM analyzes collected data and makes an assessment determination about whether to approve, accept, or reject the performance or design of a certificate holder's or applicant's programs.

**B. Scope.** In Analysis and Assessment, the PI/CPM will:

- Analyze data,
- Determine if there is enough data,
- Decide if there are data review issues,
- Make an assessment,
- Decide if action is required, and
- Determine if acceptance/approval is required.

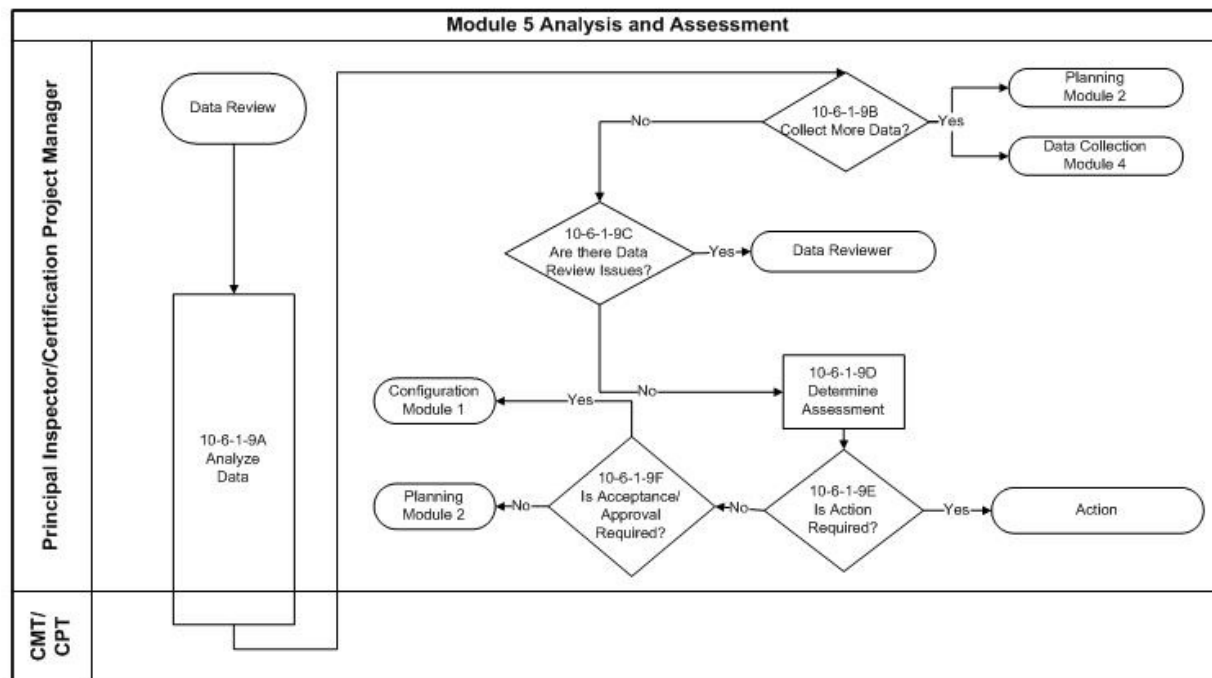
**10-6-1-3 RESERVED.**

**10-6-1-5 BACKGROUND.** SAS encompasses certification, routine surveillance, and certificate management processes for the Federal Aviation Administration (FAA) to perform oversight of certificate holders. It assesses the safety of Title 14 of the Code of Federal

Regulations (14 CFR) parts 121, 135, and 145 certificate holder's operating systems using system safety principles, Safety Attributes, and risk management (RM). SAS also assesses the requirement to provide service at the highest level of safety in the public interest. The Analysis and Assessment Module contains the processes for making a decision about whether to approve, accept, or reject the performance or design of a certificate holder's or applicant's programs.

### 10-6-1-7 ANALYSIS AND ASSESSMENT.

**Figure 10-6-1A. Module 5 Analysis and Assessment Process Flowchart**



**10-6-1-9 PROCEDURES.** This section describes the steps for the Analysis and Assessment process of the AAA. All assessments are due at the end of the quarter and are considered complete if the assessment occurs within 30 calendar-days of the due date.

**A. Analyze Data (see flowchart process step 10-6-1-9A).** During this step, the PI/CPM analyzes the data collected in the Data Collection Module to determine if there is enough data to make an assessment determination. The PI/CPM can review the data even if one of the Data Collection Tools (DCT) is still in progress. Review the following data and reports to determine if there is enough data to make an assessment determination. There may be scenarios when the same unfavorable finding is documented in multiple locations. This is possible within the same DCT or when System or Subsystem Performance Data Collection Tool (SP DCT) and Element Performance Data Collection Tool (EP DCT) questions document the same unfavorable finding. If this occurs, it should be considered when making the assessment determination. The Principal Maintenance Inspector (PMI) and Principal Avionics Inspector (PAI) should collaborate to complete the analysis when they have a shared certificate holder.

**1) Safety Performance Analysis System (SPAS).** Provides detailed information for the selected element, system, or subsystem.

**2) Findings Report.** The Findings Report defaults to questions with unfavorable responses from all the associated DCTs within that assessment. The report includes all related PI-created Custom Data Collection Tools (C DCT), En Route inspections, random inspections (RI), and Dynamic Observation Reports (DOR).

**3) Historical Data Report.** This report lists all of the previous assessment results.

**4) Responses Listed by Question Attribute.** This report is organized by question and response type. When automation reads an unfavorable response from the “Procedures” questions, which may contain both regulations and guidance, it records it as “Regulatory.” To determine if the finding is regulatory- or guidance-based, PIs will need to review the DCT. Not all unfavorable responses require Compliance Action. PI instructions should direct ASIs to include the regulation (if the finding is regulatory) in the comment section if they answer “unfavorable.” The other Safety Attribute questions (i.e., Responsibility, Authority, Controls, Process Measurement, Interfaces, and Safety Ownership) may be nonregulatory.

**5) Response Listed by DCT Report.** This report lists all of the DCT responses associated with an assessment. Part 145 PIs can view the parts 121 and 135 DCTs rolled up in the AAA by selecting the assessment performed at the EMP during coordinated surveillance.

**6) Certificate Holder Assessment Tool (CHAT) Summary.** The CHAT Report contains the certificate holder or applicant risk indicators and associated actions, and can be used to prevent duplication of previous actions and identify systemic issues.

**7) SAS Standard Reports.** SAS Standard Reports allow users to generate reports matching selected criteria for each module in SAS. A list of reports is available from the SAS Menu and located in the SAS Automation User Guide (AUG).

**8) Operations Research Analyst (ORA) Reports.** The PI/CPM may request an ORA to generate reports to assist with the analysis of the data. For example, the PI/CPM may request an ORA to help analyze data from a Commercial Aviation Safety Team (CAST) Safety Enhancement (SE) report.

**9) Other Reports.** Additional reports, such as the SAS Compliance and Enforcement Action Comprehensive Report, are available in the Short Term Solutions Tab on the SAS Assistance, Feedback, or Enhancement (SAFE) task management site.

**B. Collect More Data? (see flowchart process step 10-6-1-9B).** The PI/CPM reviews the data to determine if enough data exists to make an assessment determination. If the data is sufficient to make an assessment determination, then see Step 10-6-1-9D, Determine Assessment. If more data is needed, then the PI/CPM has two options:

**1)** If the PI/CPM determines that additional DCTs are needed, then the PI/CPM goes to the Comprehensive Assessment Plan (CAP) and adds the DCTs. When this step occurs, the assessment is automatically extended an additional quarter.

2) If the PI/CPM determines the ASI needs to collect more data on an existing DCT, then the PI/CPM sends the DCT back to Data Collection with an explanation of what the ASI needs to accomplish. When this step occurs, the assessment is not automatically extended an additional quarter.

**C. Are There Data Review Issues? (see flowchart process step 10-6-1-9C).** If there is quality data to make an assessment, then see Step 10-6-1-9D, Determine Assessment. If the PI/CPM determines that the data submitted is not of a quality to allow them to make an assessment determination, then the PI/CPM returns the DCT to the Data Quality Reviewer (DQR) with a detailed explanation of what items need to be addressed. The DQR returns the DCT to the ASI who collected the data.

**D. Determine Assessment (see flowchart process step 10-6-1-9D).** During this step, the PI/CPM makes an assessment determination and must provide justification for the selection, unless there were no issues or findings. An assessment determination consists of making a judgment and conclusion regarding the certificate holder's or applicant's performance and design. The PI/CPM may convene a meeting to review data to assist in making the assessment. The automation allows the PI/CPM to make an assessment determination as long as the data review is complete, even when the DCT is scheduled for a future quarter in the CAP. If the assessment is completed early, then the baseline interval is reset.

**1) Shared Assessments.** The PMI and PAI should collaborate to complete the AAA assessment determination when they have a shared certificate holder.

**2) Assessment Determination Options.** Before the PI/CPM accepts or approves a certificate holder's or applicant's system with mitigation, the PI/CPM must determine the extent of the deficiencies and identify hazards that may exist. For example, some hazards are isolated incidents that are typically related to performance and do not necessarily require system-level changes; however, there may be an indication of systemic hazards. Systemic hazards may indicate defects in the design of the certificate holder's or applicant's processes (e.g., missing procedures, poor controls, or lack of attention to interfaces), patterns of repeated noncompliance with procedures, or significant changes in the operating environment. Controlling or eliminating systemic hazards requires modifications to the system design. The PI/CPM considers the options in Table 10-6-1A, Assessment Determination Options, when making an assessment determination of a certificate holder's or applicant's design or performance.

**3) Assessment Determination Justification.** Once the PI/CPM has made the assessment determination, they must provide justification for their selection in the "Assessment Determination Justification" field, unless there were no issues or findings. This field should contain the reason why the specific assessment determination was selected and what specific issues were related to the decision process. The PI/CPM should provide a sound reason and facts in the justification field that support the assessment determination option. Frontline Managers (FLM)/Office Managers (OM) may verify the assessment determination, justification, and action selections made by the PI/CPM.

**4) Validation of Assessment.** Once the PI/CPM makes an assessment determination, the automation validates if the assessment corresponds to the DCT responses.

The automation notifies the PI/CPM if it detects a possible conflict between the assessment determination and the DCT responses. For example, if there are unfavorable responses and the PI/CPM chooses “No issues or findings observed,” then the PI/CPM needs to determine if there is a need to revise the assessment determination. Once the conflict is resolved, the automation changes the status of the assessment determination to show it as complete.

**5) Compliance Action.** If the PI/CPM selects 2–4 as an assessment determination, then an action must be added. The “Regulatory Compliance Action” choice is only available when 3 or 4 is selected. Justification for the action selected will be documented in the “Action Justification” comment box. The PI/CPM will refer to Volume 14 for a determination of Compliance Action. The PI/CPM will consider if the risk was addressed and mitigated at the point of discovery or if the underlying issue(s) warrants further correction and/or followup action. When the risk is mitigated at the point of discovery, “Regulatory Compliance Action” must still be selected so that the action items are tracked on the Action Item Tracking Tool (AITT) under “Manage Corrective Actions and Events.”

**E. Is Action Required? (see flowchart process step 10-6-1-9E).** If the PI/CPM decides that action is required, which includes action to address regulatory noncompliance in accordance with Volume 14, then see Volume 10, Chapter 6, Section 2 for information on action choices. If the PI/CPM decides no action is required, then see Step 10-6-1-9F, Is Acceptance/Approval Required?

**F. Is Acceptance/Approval Required? (see flowchart process step 10-6-1-9F).**

**1)** The PI/CPM can close the assessment and approve or accept the program if they determine that the certificate holder’s or applicant’s performance or design meets the requirements. (See Volume 10, Chapter 2, Section 1.)

**2)** If the CPM determines the applicant’s performance or design does not meet the requirements, then the CPM may plan future Element Performance Assessments (EPA) or C DCTs prior to issuing the certificate. (See Volume 10, Chapter 3, Section 1.)

**3)** If the PI determines the certificate holder’s performance or design does not meet the requirements, then the PI may plan future EPAs, Element Design Assessments (EDA), or C DCTs prior to approving the program. (See Volume 10, Chapter 2, Section 1 and Volume 10, Chapter 3, Section 1.)

**Table 10-6-1A. Assessment Determination Options**

<b>Option</b>	<b>Assessment Analysis</b>	<b>Assessment Findings</b>	<b>Action</b>
<b>1</b>	<b>Performance or Design Affirmed</b>	<b>No issues or findings observed</b>	<b>No action required</b>
<b>2</b>	<b>Performance or Design Affirmed</b>	<b>Minor, nonregulatory issues observed</b>	<b>Action required</b>
<b>3</b>	<b>Performance or Design Affirmed</b>	<b>Nonsystemic regulatory issues observed</b>	<b>Action required</b>
<b>4</b>	<b>Performance or Design Not Affirmed with Action Required</b>	<b>Regulatory and/or Systemic issues observed</b>	<b>Action required</b>

NOTE: Any of the assessment determination options may be selected for safety issues. The colors in Table 10-6-1A correspond to the automation assessment determination results based on the analysis of available data.

**10-6-1-11 through 10-6-1-29 RESERVED.**